IN THE CLAIMS:

Listing of claims:

Claims 1 to 4 (Canceled).

Claim 5. (Currently Amended) A plasma processing method for performing plasma processing by using a plasma processing system comprising a chamber for housing a substrate-to-be-processed; a belljar disposed on the chamber in communication with the chamber and having a side wall and a top wall of an insulator; a conducting mount disposed in the chamber, for the substrate-to-be-processed to be mounted on; an antenna means disposed on the outside of the side wall of the belljar, for generating induced electromagnetic fields in the belljar; a first high-frequency electric power source for supplying high-frequency electric power to the antenna means; gas supply means for supplying a plasma generating gas which is dissociated by the induced electromagnetic fields generated by the antenna means to be plasmas, and a processing gas for the plasma processing; a conducting member disposed upper of the top wall, opposed to the mount, and being permanently grounded; and a second high-frequency electric power source for supplying high-frequency electric power to the mount,

high-frequency electric power being supplied from the second high-frequency electric power source to the mount to generate electric fields between the mount and the conducting member and to ignite plasmas based on only the high frequency power from said mount to said grounded conducting member, and then, after ignition is achieved with said second high-frequency electric power source, high-frequency electric power being supplied from the first high-frequency electric power source to the antenna means is initiated to generate induced

electromagnetic fields in the belljar and generate inductive coupled plasmas, whereby the plasma processing is made on the substrate-to-be-processed.

Claim 6. (Currently Amended) A plasma processing method for performing plasma processing by using a plasma processing system comprising a chamber for housing a substrate-to-be-processed; a belljar disposed on the chamber in communication with the chamber and having a side wall and a top wall of an insulator; a conducting mount disposed in the chamber, for the substrate-to-be-processed to be mounted on; an antenna means disposed on the outside of the side wall of the belljar, for generating induced electromagnetic fields in the belljar; a first high-frequency electric power source for supplying high-frequency electric power to the antenna means; gas supply means for supplying a plasma generating gas which is dissociated by the induced electromagnetic fields generated by the antenna means to be plasmas, and a processing gas for the plasma processing; a Faraday shield disposed between the belljar and the antenna means; a conducting member disposed upper of the top wall, opposed to the mount, and being permanently grounded; and a second high-frequency electric power source for supplying high-frequency electric power to the mount,

high-frequency electric power being supplied from the second high-frequency electric power source to the mount to generate electric fields between the mount and the conducting member and to ignite plasmas based on only the high frequency power from said mount to said grounded conducting member, and then, after ignition is achieved with said second high-frequency electric power source, high-frequency electric power being supplied form the first high-frequency electric power source to the antenna means is initiated to generate induced electromagnetic fields in the belljar to generate inductive coupled plasmas, whereby the plasma processing is made on the substrate-to-be-processed.

Claim 7. (Previously Presented) A plasma processing method according to claim 5, wherein

the second high-frequency electric power source stops supplying high-frequency electric power after the first high-frequency electric power source has started the supply of the high-frequency electric power.

Claim 8. (Previously Presented) A plasma processing method according to claim 5, wherein the plasma processing is performed while the substrate-to-be-processed is being heated.

Claim 9. (Original) A plasma processing method according to claim 8, wherein the plasma processing is for removing natural oxide films formed on the substrate-to-be-processed.

Claim 10. (Original) A plasma processing method according to claim 9, wherein the plasma generating gas and the processing gas are argon gas and hydrogen gas.

Claim 11. (Previously Presented) A plasma processing method according to claim 10, wherein the first high-frequency electric power source is connected to an upper end portion of the antenna means.

Claims 12 and 13 (Canceled).

Claim 14. (Previously Presented) A plasma processing method according to claim 5, wherein after the induced electromagnetic fields are generated, said second high-frequency electric power source is shut down.

Claim 15. (Previously Presented) A plasma processing method according to claim 6, wherein the second high-frequency electric power source stops supplying high-frequency electric power after the first high-frequency electric power source has started the supply of the high-frequency electric power.

Claim 16. (Previously Presented) A plasma processing method according to claim 6, wherein the plasma processing is performed while the substrate-to-be-processed is being heated.

Claim 17. (Previously Presented) A plasma processing method according to claim 16, wherein the plasma processing is for removing natural oxide films formed on the substrate-to-be-processed.

Claim 18. (Previously Presented) A plasma processing method according to claim 17, wherein the plasma generating gas and the processing gas are argon gas and hydrogen gas.

Claim 19. (Previously Presented) A plasma processing method according to claim 18, wherein the first high-frequency electric power source is connected to an upper end portion of the antenna means.

Claim 20. (Previously Presented) A plasma processing method according to claim 6, wherein after the induced electromagnetic fields are generated, said second high-frequency electric power source is shut down.

Claim 21. (Previously Presented) A plasma processing method according to claim 5, wherein said conducting member has a surface which opposes said belljar that is a flat surface.

Claim 22. (Previously Presented) A plasma processing method according to claim 21 wherein said conducting member is a flat disc object.

Claim 23. (Previously Presented) A plasma processing method according to claim 5 wherein said grounded conducting member is not directly electrically coupled to a high-frequency electric power source.

Claim 24. (Previously Presented) A plasma processing method according to claim 6, wherein said conducting member has a surface which opposes said belljar that is a flat surface.

Claim 25. (Previously Presented) A plasma processing method according to claim 24 wherein said conducting member is a flat disc object.

Claim 26. (Previously Presented) A plasma processing method according to claim 6 wherein said grounded conducting member is not directly electrically coupled to a high-frequency electric power source.

Claim 27. (New) A plasma processing method for performing plasma processing by using a plasma processing system comprising a chamber for housing a substrate-to-be-processed; a belljar disposed on the chamber in communication with the chamber and having a side wall

and an insulator top wall; a conducting mount disposed in the chamber, for the substrate-to-be-processed to be mounted on; an antenna means disposed on the outside of the side wall of the belljar, for generating induced electromagnetic fields in the belljar; a first high-frequency electric power source for supplying high-frequency electric power to the antenna means; gas supply means for supplying a plasma generating gas which is dissociated by the induced electromagnetic fields generated by the antenna means to be plasmas, and a processing gas for the plasma processing; a conducting member that is opposed to said mount and disposed external to said belljar upper of the insulator top wall, said conducting member being grounded; and a second high-frequency electric power source for supplying high-frequency electric power to the mount,

high-frequency electric power being supplied from the second high-frequency electric power source to the mount to generate electric fields extending vertically from the mount toward the grounded conducting member and to ignite plasmas based on the high frequency power provided to said mount while said grounded conducting member is in a state free from direct electrical connection with a high-frequency electric power source, and then, after ignition is achieved with said second high-frequency electric power source, high-frequency electric power being supplied from the first high-frequency electric power source to the antenna means is initiated to generate induced electromagnetic fields in the belljar and generate inductive coupled plasmas, whereby the plasma processing is made on the substrate-to-be-processed.

Claim 28. (New) A plasma processing method according to claim 27, wherein the supply of high-frequency electric power from the first high frequency electric power source to the antenna means is started to generate induced electromagnetic fields in the belly or while the

supply of high frequency electric power from the second high-frequency electric power source to the moment is stopped.